

### **REMARKS**

Reconsideration is respectfully requested in light of the foregoing Amendment and the following remarks.

Claims 1-6 and 15-20 are currently pending in the application, with claims 1 and 15 being the independent claims. Claim 1 is currently amended. Claims 7-14 are withdrawn from consideration. Claims 15-20 are new. These changes are believed to introduce no new matter, and their entry is respectfully requested.

#### **Rejection Under 35 U.S.C. § 103(a)**

The Examiner presents an obviousness rejection in the Office Action, Paper No. 6, mailed on December 5, 2003:

Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taga et al. (US Pat No. 6,181,449) (hereinafter "Taga") in view of Jinguji et al., (US Pat No. 5,572,611) (hereinafter "Jinguji"). See Office Action at ¶ 4.

Applicant respectfully submits that this rejection has been rendered moot or is accommodated by the above-entered amendments. Additionally, with respect to both the above-amended claims and the newly submitted claims, applicant respectfully traverses the rejection and submits the following remarks.

With respect to amended independent claim 1, the Office Action contends that Taga in view of Jinguji teaches the claimed invention. See Office Action at ¶ 4. Applicants respectfully set forth below that the combination of Taga and Jinguji does not address nor show examples of the elements of the independent claims. First, Taga neither teaches nor suggests elements of the

independent claims. Second, Jinguji does not overcome the deficiencies of Taga. Jinguji does not appear to disclose or render obvious at least the claimed relationship of amended claim 1.

In particular detail, Taga neither teaches nor suggests at least the following elements of claim 1: 1) K group delay controllers, 2) the group delay controllers having either or both of their input or output parts of lattice-form optical circuits being connected to N waveguides, 3) the lattice-form optical circuits with at least two directional couplers arranged with the waveguides, and 4) the waveguides with different optical path lengths between the directional couplers. The Office Action acknowledges these deficiencies at ¶ 7.

In addition, Jinguji appears to disclose a lattice-form variable group delay dispersion equalizer. Jinguji, however, does not teach or suggest the changing relationship between K and N. The Office Action offers that the combination of Taga and Jinguji would provide a teaching of a  $K = N$  relationship, where the lattice-form variable group delay dispersion equalizer of Jinguji is incorporated into the dispersion slope equalizer of Taga.

Applicant respectfully submits that where  $K < N$ , the relationship is not obvious to one of ordinary skill in the art. The above-amended claims are appropriately amended to reflect this non-obviousness. Applicant respectfully submits that there is nothing, alone or in combination, of the cited references that teaches the claims as amended. Specifically, Taga and Jinguji, either alone or in combination, do not teach or suggest the relationship where  $K < N$ .

For at least the above reasons, Applicant respectfully submits that claim 1 is believed to be patentable over the applied combination. Furthermore, claims 2-6 depend from the independent claim 1, and are believed to be allowable for at least the reasons described above, and further in view of their own respective features. Similarly, applicant notes that withdrawn

claim 7 is dependent from claim 1, and is believed to be allowable for at least the reasons described above, and further in view of its own respective features.

Furthermore, newly submitted independent claim 15 recites similar subject matter to that recited for amended claim 1 and is, therefore, allowable for the same reasons discussed above for amended claim 1. Additionally, claims 16-20 depend from the independent claim 15, and are believed to be allowable for at least the reasons described above, and further in view of their own respective features.

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all currently outstanding objections and rejections and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite the prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

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